Table S1 Primer sequences for RT-qPCR

Primer	Sequences
GAPDH-F	GGTCATCCATGACAACTTTGGTATC
GAPDH-R	GTAGAGGCAGGGATGATGTTCTG
FAT1-F	GGTCCAGATCGAGGCATTTGA
FAT1-R	TCATCTTGCTGTTCTCGGTCTAG
FAT1-Trunc-F	GGCGTTTGGATCTGCTGAGTA
FAT1-Trunc-R	GTCTCTGAGCTCCTTCCAGTC
E2F1-F	GCTGGACCTGGAAACTGACC
E2F1-R	TCATAGCGTGACTTCTCCCCC
MAP3K8-F	CCGGGCAGTCTCTTTCTGTT
MAP3K8-R	GCTCTGCCCCTGACTCAC
MAP2K2-F	TATTGTGAACGAGCCACCTCC
MAP2K2-R	TTACACAACCAGCCGGCAAA
MAP2K6-F	GCCGAAGTGTGGTCTTTGGA
MAP2K6-R	CTGCAGTTCGCTTACTTGCC
DUSP6-F	ATGGACCGACTGTACCGTGT
DUSP6-R	ACATGTGGCTGTCATCTTGGT
L1CAM-F	ATCATCCTCCTGCTCCTCGT
L1CAM-R	TCTCCAGGGACCTGTACTCG
CDH5-F	ATGAGATCGTGGTGGAAGCG
CDH5-R	ATGTGTACTTGGTCTGGGTGA

RT-qPCR, reverse transcription-quantitative polymerase chain reaction; F, forward primer; R, reverse primer.

Table S2 Top 100 significantly differentially expressed genes (P<0.05) in *FAT1* knocked-down KYSE30 cells

Gene ID	Gene_name	Gene_locus	siFAT_FPKM	siCtrl_FPKM	Log2 fold change	P	Padj
ENSG00000172062	*SMN1*	5:70220768–70249769	5.409958	51.32826	–3.25018	9.20E-13	2.11E-08
ENSG00000228589	*SPCS2P4*	1:28421582–28422933	1.704209	16.4227	–3.27085	5.89E-12	6.76E-08
ENSG00000094755	*GABRP*	5:170190354–170241051	2.248404	0.139269	3.985165	3.52E-10	2.69E-06
ENSG00000233013	*FAM157B*	9:141106637–141143444	0.141909	1.719214	–3.58454	2.44E-09	1.40E-05
ENSG00000144857	*BOC*	3:112929850–113006303	1.273603	0.11785	3.411765	2.95E-08	0.000136
ENSG00000226054	*MEMO1P1*	21:37502669–37504208	10.44055	1.85337	2.48752	6.49E-08	0.000237
ENSG00000180673	*EXOC5P1*	4:63682544–63684512	0.553869	0.013287	5.217273	7.22E-08	0.000237
ENSG00000114854	*TNNC1*	3:52485118–52488086	2.043411	0.088238	4.448301	1.15E-07	0.00033
ENSG00000188199	*NUTM2B*	10:81462983–81474437	0.40364	0.017786	4.419231	1.52E-07	0.000387
ENSG00000272343	*RP11-140I16.3*	8:57135247–57135732	1.495978	0	7.856664	7.40E-07	0.0017
ENSG00000169627	*BOLA2B*	16:30204255–30205627	6.462627	28.7566	–2.15757	1.28E-06	0.002682
ENSG00000251070	*BMS1P6*	10:48187416–48199256	0.491616	0	7.705352	2.40E-06	0.0046
ENSG00000225465	*RFPL1S*	22:29832818–29874164	0.526845	0.058036	3.147156	8.67E-06	0.015322
ENSG00000009724	*MASP2*	1:11086580–11107290	0.63512	0.05413	3.496074	1.26E-05	0.020666
ENSG00000139899	*CBLN3*	14:24895738–24900160	0.806774	0.102465	2.947334	1.47E-05	0.021116
ENSG00000166268	*MYRFL*	12:70219084–70352877	0.398282	0.026058	3.850765	1.47E-05	0.021116
ENSG00000147573	*TRIM55*	8:67039131–67087720	0.012702	0.356515	–4.646	1.58E-05	0.021279
ENSG00000186442	*KRT3*	12:53183469–53189901	0.565061	0.079075	2.811247	1.83E-05	0.022482

Table S2 (*continued*)

Table S2 (*continued*)

Gene ID	Gene_name	Gene_locus	siFAT_FPKM	siCtrl_FPKM	Log2 fold change	P	Padj
ENSG00000183783	*KCTD8*	4:44175926–44450824	0.349388	0	7.411466	1.96E-05	0.022482
ENSG00000237938	*RP11-288I21.1*	1:16049214–16063391	0.826615	0	7.411466	1.96E-05	0.022482
ENSG00000152726	*FAM21B*	10:47894023–47949412	0.219917	1.016119	−2.20698	2.83E-05	0.030915
ENSG00000130635	*COL5A1*	9:137533620–137736686	2.739808	0.699106	1.963217	3.32E-05	0.033136
ENSG00000109511	*ANXA10*	4:169013666–169108841	0.025271	0.654749	−4.53108	3.37E-05	0.033136
ENSG00000197409	*HIST1H3D*	6:26197068–26199521	3.076838	0.574103	2.407265	3.46E-05	0.033136
ENSG00000020181	*GPR124*	8:37641709–37702414	0.360846	0.056548	2.652953	3.61E-05	0.033166
ENSG00000271815	*CTD-2235C13.3*	5:74659585–74660067	0	0.975007	−7.23828	4.78E-05	0.042186
ENSG00000198576	*ARC*	8:143692405–143696833	0.589737	0.096098	2.594743	5.29E-05	0.044146
ENSG00000174498	*IGDCC3*	15:65619465–65670378	1.223256	0.248577	2.285585	5.38E-05	0.044146
ENSG00000183793	*NPIPA5*	16:15457516–15474904	0.177824	1.234089	−2.77703	5.82E-05	0.045299
ENSG00000150165	*ANXA8L1*	10:47157983–47174093	0.408894	1.765685	−2.1097	5.92E-05	0.045299
ENSG00000202198	*RN7SK*	6:52860418–52860748	4.539458	0.790414	2.50285	7.11E-05	0.048664
ENSG00000037280	*FLT4*	5:180028506–180076624	0.010123	0.240426	−4.4062	7.35E-05	0.048664
ENSG00000236617	*RP11-46H11.12*	12:133464428–133465169	1.047994	0.04714	4.314013	7.35E-05	0.048664
ENSG00000255967	*RP11-438L7.3*	12:8786963–8790204	0.254545	0.01145	4.314013	7.35E-05	0.048664
ENSG00000259804	*CTD-2012K14.7*	16:67595314–67596212	0.512194	0	7.2013	7.55E-05	0.048664
ENSG00000259243	*GOLGA6L19*	15:83011379–83018198	0.750822	0.090061	3.017247	7.63E-05	0.048664
ENSG00000183578	*TNFAIP8L3*	15:51348795–51397473	0.299989	0.023132	3.614736	8.17E-05	0.049821
ENSG00000101222	*SPEF1*	20:3758151–3762095	0.597876	0.090061	2.701856	8.24E-05	0.049821
ENSG00000269990	*CTD-3074O7.12*	11:66303369–66305407	2.008676	0.538908	1.890325	0.000104	0.060948
ENSG00000083857	*FAT1*	4:187508937–187647876	43.28378	133.7042	−1.63191	0.000107	0.061382
ENSG00000269054	*CTD-2619J13.3*	19:58873951–58877958	0.705572	0.033117	4.252951	0.00011	0.061382
ENSG00000233337	*UBE2FP3*	1:111980136–111980659	0	0.798861	−7.06955	0.00012	0.063304
ENSG00000273156	*RP11-127B20.2*	4:83266029–83266693	0.655981	0	7.123842	0.00012	0.063304
ENSG00000245711	*NADK2-AS1*	5:36221157–36222004	0.168298	1.308135	−2.931	0.000121	0.063304
ENSG00000205683	*DPF3*	14:73086004–73360809	0.207135	1.024892	−2.29923	0.000127	0.064657
ENSG00000169174	*PCSK9*	1:55505221–55530525	2.306266	0.668728	1.779379	0.000135	0.067382
ENSG00000261597	*RP11-353B9.1*	15:49944336–49948429	0.023678	0.204496	−3.07449	0.000138	0.067382
ENSG00000111341	*MGP*	12:15034115–15038860	36.15032	11.74596	1.616772	0.000157	0.073872
ENSG00000174194	*AGAP8*	10:51224681–51371321	0.900366	0.161998	2.452153	0.000163	0.073872
ENSG00000174521	*TTC9B*	19:40721965–40724306	0.015309	0.330546	−4.26948	0.000164	0.073872
ENSG00000236431	*AC009237.11*	2:96201865–96202243	1.406772	0.069031	4.189189	0.000164	0.073872
ENSG00000088053	*GP6*	19:55525073–55549632	0.371744	0.03087	3.508334	0.000167	0.073872
ENSG00000169583	*CLIC3*	9:139889087–139891255	29.72199	9.6876	1.612147	0.000177	0.076852
ENSG00000214940	*NPIPA8*	16:18411799–18441131	0.291042	1.135932	−1.96402	0.000191	0.0811
ENSG00000112541	*PDE10A*	6:165740776–166400091	0.541212	1.73594	−1.68501	0.000196	0.081985
ENSG00000179044	*EXOC3L1*	16:67218269–67224107	0.556412	0.083427	2.703749	0.000211	0.085184
ENSG00000260604	*RP1-140K8.5*	6:3905144–3912213	0.123402	0.018503	2.703749	0.000211	0.085184
ENSG00000234231	*AC093616.4*	2:88000503–88038766	0.638541	2.228317	−1.8048	0.000228	0.087622
ENSG00000102385	*DRP2*	X:100474758–100519486	0.007813	0.096993	−3.55545	0.000241	0.087622
ENSG00000136449	*MYCBPAP*	17:48585745–48608862	0.037028	0.459696	−3.55545	0.000241	0.087622
ENSG00000222020	*AC062017.1*	2:240323130–240324058	0.115956	1.439574	−3.55545	0.000241	0.087622
ENSG00000269896	*RP4-740C4.6*	1:2281853–2284259	0.815548	0.19565	2.047422	0.000244	0.087622

Table S2 (*continued*)

Table S2 (*continued*)

Gene ID	Gene_name	Gene_locus	siFAT_FPKM	siCtrl_FPKM	Log2 fold change	P	Padj
ENSG00000177694	*NAALADL2*	3:174156363–175523428	0.849999	0.149379	2.483511	0.000246	0.087622
ENSG00000166592	*RRAD*	16:66955582–66959547	0.550792	0.028315	4.122478	0.000248	0.087622
ENSG00000268650	*AC068499.10*	19:18315540–18331290	0.994008	0.051099	4.122478	0.000248	0.087622
ENSG00000144583	*4−Mar*	2:217122588–217236750	0.877403	2.64745	−1.59731	0.000276	0.094002
ENSG00000263320	*RP11−498D10.6*	16:71963914–71965102	0.713389	0.11002	2.663255	0.00028	0.094002
ENSG00000180596	*HIST1H2BC*	6:26115101–26124154	12.72822	4.083932	1.633976	0.000291	0.094002
ENSG00000090661	*CERS4*	19:8271620–8327305	3.35701	0.968069	1.786044	0.000292	0.094002
ENSG00000261655	*CTD−3064M3.3*	8:142363503–142365465	0.345683	0.039984	3.057257	0.0003	0.094002
ENSG00000146070	*PLA2G7*	6:46671938–46703430	0.222066	0	6.862874	0.000315	0.094002
ENSG00000164509	*IL31RA*	5:55147207–55218678	0	0.160836	−6.97715	0.000315	0.094002
ENSG00000223979	*SMCR2*	17:17577340–17581002	0.644544	0	6.862874	0.000315	0.094002
ENSG00000255585	*RP11−188C12.2*	9:140682117–140683139	0.35535	0	6.862874	0.000315	0.094002
ENSG00000269846	*RBL1*	20:35724188–35725581	0	0.281521	−6.97715	0.000315	0.094002
ENSG00000269903	*RP11−571M6.18*	12:58208277–58208709	0	0.906329	−6.97715	0.000315	0.094002
ENSG00000271803	*RP1−63M2.5*	20:32262323–32263186	0.826188	0	6.862874	0.000315	0.094002
ENSG00000260051	*LA16c−390E6.4*	16:1501761–1502654	0.425173	2.019576	−2.23803	0.000333	0.097904
ENSG00000142920	*ADC*	1:33546705–33586131	0.950682	0.211778	2.151327	0.000338	0.098341
ENSG00000228137	*AP001469.7*	21:47666804–47667596	1.491375	0.134168	3.393454	0.000349	0.098807
ENSG00000253559	*OSGEPL1−AS1*	2:190627430–190630282	1.077104	0.096899	3.393454	0.000349	0.098807
ENSG00000120738	*EGR1*	5:137801179–137805004	4.139541	1.392342	1.566469	0.000355	0.099482
ENSG00000169282	*KCNAB1*	3:155755490–156256545	0.595795	0.094587	2.621592	0.000372	0.102948
ENSG00000269951	*RP11−797A18.6*	15:77359996–77360667	0.036064	0.700786	−4.11843	0.000377	0.102948
ENSG00000171873	*ADRA1D*	20:4201329–4229721	2.924115	0.967541	1.589637	0.000406	0.109612
ENSG00000121966	*CXCR4*	2:136871919–136875735	0.158022	0.713387	−2.16617	0.000416	0.109612
ENSG00000262691	*CTC−277H1.7*	16:67295011–67297687	0.244431	0.029319	3.005036	0.000419	0.109612
ENSG00000263740	*RN7SL4P*	3:15780022–15780315	1.813492	6.852133	−1.91633	0.00042	0.109612
ENSG00000134258	*VTCN1*	1:117686209–117753556	17.60335	6.175808	1.50607	0.000425	0.109728
ENSG00000163623	*NKX6−1*	4:85413140–85419603	0.743832	0.184474	1.999144	0.000444	0.113408
ENSG00000235169	*SMIM1*	1:3689352–3692546	3.280273	0.792809	2.035269	0.000462	0.116388
ENSG00000224419	*KRT18P27*	13:90882638–90883936	0.074626	0.563938	−2.88262	0.000466	0.116388
ENSG00000271780	*RP11−1017G21.5*	14:102414684–102415762	0.112302	0.751662	−2.71604	0.000495	0.121711
ENSG00000247627	*MTND4P12*	5:134262350–134263726	1.777574	5.281938	−1.57473	0.000503	0.121711
ENSG00000167588	*GPD1*	12:50497602–50505102	0.480519	0.045108	3.332392	0.000507	0.121711
ENSG00000215912	*TTC34*	1:2567415–2718286	0	0.173674	−6.87843	0.000517	0.121711
ENSG00000273448	*RP11−166O4.6*	7:66798034–66799370	0.253768	0	6.764224	0.000517	0.121711
ENSG00000253570	*RNF5P1*	8:38458179–38458718	0.314155	1.792629	−2.49545	0.000519	0.121711
ENSG00000255248	*RP11−166D19.1*	11:121899063–121987031	0.374941	1.379889	−1.87842	0.000552	0.128131
ENSG00000165125	*TRPV6*	7:142568956–142583507	0.559696	0.130914	2.081086	0.000573	0.130824